

REMARKS

Claims 6-46 have been canceled.

Claims 1-5, 47 and 48 remain pending in the application. Of these, claim 1 is currently amended.

All claims are rejected under the doctrine of obviousness-type double patenting over all claims of U.S. Patent No. 6,083,260 (the '260 Patent). A terminal disclaimer based on the '260 Patent was submitted as Attachment B in applicant's Amendment D filed on February 4, 2005. A copy of the terminal disclaimer is attached (Attachment A).

Claims 1-5 are rejected under 35 U.S.C. §102(b) based on Rom et al. U.S. 5,746,709 (Rom '709) and Kolff et al. U.S. 5,306,295 (Kolff '295). Claim 1 has been amended in view of these rejections. Rom '709 discloses an intravascular pump and bypass assembly. The pump 40 is mounted within a lumen 42 of a catheter body 32. Fluid (i.e., blood) is drawn into the distal end 16 of the primary catheter 14 and into the pump through lumen 42 and is output from the pump 40 through lumen 42 into secondary catheter 20, supply catheter 24, and cannula 26, i.e., fluid flow into and out of pump 40 is in a single flow path. An inflatable balloon 34 is provided on the exterior surface of the catheter body 32. An inflation lumen 36, discrete from lumen 42, is fluidly connected to the balloon 34 to inflate the balloon through the application of fluid under pressure through the connector/valve 38 and lumen 36 (see col. 3, lines 5-15). As defined by the amended claim 1, there is no fluid communication between pump 40 and/or lumen 42 and inflation lumen 36 (i.e., the first and second passageways). It is apparent that it would be undesirable to provide such fluid communication as blood is directed through lumen 42 and an inflation media is directed through lumen 36, as such communication would permit intermixing of the two different fluids. Kolff '295 discloses a ventricle assist device in which an interconnect means 40 defines a fluid flow path (i.e., for transfer of hydraulic fluid) between pumping chamber 26 and volume displacement chamber 25. Pump and drive motor 30 are located, at least in part, within displacement chamber 25 to transfer hydraulic fluid between the pumping and displacement chambers 26 and 25. Fluid flow into and out of the pump and motor 30 and pump housing is in a single flow path through interconnect means 40. The second passageway (between inner walls 47 and outer walls 28/29) does not permit fluid flow output from the pump in the reverse direction, i.e., the rotor does not direct fluid from the first passageway into the second passageway to exit the pump through the second passageway.

The cited references do not teach or suggest, alone or in combination, a pump in which inner walls form a first passageway permitting fluid flow into the pump in a first direction and a second passageway in fluid communication with the first passageway formed between the inner walls and outer walls which permits fluid flow output from the pump in the reverse direction and in which the rotor directs fluid from the first passageway into the second passageway to exit the pump through the second passageway, as defined by amended independent claim 1. Dependent claims 2-5, 47 and 48 further define the subject matter of claim 1 and therefore also believed to be allowable over the cited references.

Reconsideration in view of the foregoing amendments and remarks and allowance of claims 1-5, 47 and 48 is respectfully requested.

Respectfully Submitted,

By Patricia A. Limbach
Patricia A. Limbach, Registration No. 50,295

RYAN KROMHOLZ & MANION, S.C.
Post Office Box 26618
Milwaukee, Wisconsin 53226
(262) 783 - 1300
17 May 2005
Customer No.: 26308

A-Med/16761-CIP 2/050517 AMENDMENT E

Enclosures: Amendment Transmittal Letter
 Attachment A
 Return Postcard